PCS NETWORK, INC.

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March 10, 1993

Ms. Donna Searcy, Secretary
Federal Communications Commission
1919 M Street, NW
Washington, DC 20036

Dear Ms. Searcy:

Enclosed please find an original and ten (10) copies of a Petition for Rulemaking seeking creation of a new type of emergency radiolocation service tied to the Commission's pending rulemakings for PCS services in the 900 and 2 GHz bands.

Because of the public interest aspect of this proposal and the fact that it relates to other existing and allocated services in Parts 22 and 90, we believe it should not be incorporated into Docket 90-314 (92-100), but rather given it its own Docket number.

I have enclosed a prepaid return envelope, and ask that you stamp one copy and return it as addressed.

Respectfully submitted,

PCS NETWORK, INC.

BY: _____
Michael A. Pfeffer, President

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of

Amendment of the Commissions Regulations	)	
for Creation of a New Emergency Location	)	
Radio Service Within the Proposed PCS	)	RM_____
Bands at 900 MHz and 1850 MHz, and	)	
in the 220 MHz IVDS Band	)	

To: The Commission

PETITION FOR RULEMAKING

INTRODUCTION

The LuxCel Group, Inc.[1], and its subsidiary PCS Network(s) of Boston, New York, and Philadelphia, hereby request the Commission to set aside frequencies within the proposed PCS (Personal Communications Services) bands at 900 MHz and 1.85 to 2.2 GHz to be used in conjunction with emergency personal transmitting devices to be incorporated in pocket pagers, cellular and PCS handsets, and in remote control units used in conjunction with IVDS services in the 220 MHz band. LuxCel and PCS Network believe that an urgent need exists for such devices and the associated service would dispatch immediate help to the location of the sending device. LuxCel is filing concurrently herewith an amendment to its experimental PCS license (along with a request for confidentiality of the contents thereof, to protect patent rights) to prove out its proposed service and technology.

[1]The LuxCel Group, Inc. was formerly known as Drivefone, Inc., and is publicly traded on the NASDAQ exchange under the symbol "LXCL". It is the parent of People's Paging and Bay Area Paging, radio common carriers

THE CONCEPT

Although personal cellular telephone terminals, when carried by individuals, offer the opportunity to summon help in the event of an emergency situation, there exists the requirement that an emergency number, such as "911", be entered onto a keyboard and then sent by pressing another button. Often this activity is accompanied by aural indications that the buttons have indexed properly. In many situations, such as in muggings and other street crimes, the time for such actions may not exist, or may precipitate hostile actions by a criminal. Further, although there are now over 10 million cellular telephones in service, less than 50% are of the hand-held variety normally carried upon one's person. There are however, some 20 million pagers in use, and all of these are, by their very nature, carried upon one's person. Therefore, LuxCel and its affiliates and subsidiaries have conceived a pager which would incorporate an emergency distress transmitter which would, when activated by pressing a single button (or other triggering action), transmit short data bursts containing the "cap code" of the pager, plus certain other indicators. These bursts would be received by a network of receiving stations which would determine by triangulation, inverse hyperbolic techniques, or other sophisticated means[2] the position of the transmitter within a small area.

The Commission has before it, proposals under Docket 92-100 for the introduction of what is commonly called "acknowledgment paging", where the pager responds with a data burst upon receipt of a message. This response is then relayed to the message initiator to indicate that the transmission was successful.

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[2]LuxCel's developments in this area will be disclosed in greater detail to the Commission upon completion of testing and submission of patent registration.

Other proposed variants of the concept include the possibility of a coded response, selected by the pager owner such as "YES", "NO", "Wait for my call".

Proposals have been made that this return "link" be located in the 901-902 MHz of the Narrow-Band PCS bands at 900-941 MHz, with outward signaling at 930 or 940 MHz. Since the creation of such a two-way signaling service has already been proposed to the Commission and the need for Acknowledgment Paging demonstrated and supported in filings in Docket 92-100, we assume that such a service will be forthcoming. If it becomes reality, then a universe of two-way pagers will be created. The type of emergency notification and location envisioned in this filing will then become feasible.

SPECTRUM ISSUES

Because of the serious nature of the transmission generated by a person in trouble, we believe activation on a clear channel, separate from the normal acknowledgment paths, is essential. Since the number of activations of the "911" function will be limited[3], it would appear that a single channel could be set aside in each of the frequency bands proposed for PCS services in Docket 90-314. The 911.000 MHz frequency falls within the Part 15 ISM band, and we think that allocation of this channel is clearly in the public interest. One reason is that the first "wireless PBXes" are beginning to appear for this frequency range[4].and PBX owners may want to avail themselves of such emergency location services by incorporating a "911" device in their wireless PBX handsets.

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[3]To reduce the number of "false alarms", we propose that the sending device become disabled both as a paging receiver and as an acknowledgment transmitting device after "911" activation. This would burden the "false alarm" sender with the cost of reprogramming unit, while the person in need of emergency help would consider it cheap insurance. Once activated, random but frequent data burst would be sent until battery exhaustion.

[4]Ericsson's "Freeset" wireless PBX system operates at 902-928 or 1910-1930 MHz (*Telocator Bulletin*, 2/5/93). At least half a dozen 900 MHz cordless phones are currently being marketed.

Also, since other unlicensed users exist in the 902-928 MHz band, it may be attractive for equipment manufacturers to add the "911.000 MHz frequency to the menu of transmit channels incorporated in their devices. Part 15 cordless telephones which operate in the 902-928 MHz range, for instance, could have the necessary channel and identifier readily enclosed in the handset. We concede, however, that revision of the Part 15 rules, coupled with the large number of incumbent users, may make a fully unoccupied channel in the 901-902 MHz band a better choice, given the requirement for reception of a weak and diminishing distress signal.

In the 1850-1990 MHz range, we propose that the emergency frequency be at 1911 MHz, which is within the proposed 1910 to 1930 MHz set-aside for Part 15 devices. It is clearly within tuning range of devices designed to operate in the Part 15 segment, and probably would also be usable by users of licensed systems in the 1850-1990 MHz range, since it falls near the midpoint of the PCS allocation proposed in Docket 90-314.

A third potential emergency frequency might be in the 220 MHz allocation for interactive TV devices (IVDS). This would be an ideal use for such activators since the IVDS concept (as described by TV Answer) calls for multiple transmitter sites within a coverage area ("cell sites") with remote receivers to pick up the weak response from the IVDS device.

TECHNICAL STANDARDS

Having established frequencies for such a service, the Commission would next face the issue of operating standards. Just as "SOS" has become the world standard distress signal, we believe the data stream generated by the "911" device must be uniform between all manufacturers, containing sufficient material to permit identification of the owner of the device, such as the pager cap code, or other ESN (electronic serial number) related to a subscriber service.

Paging and PCS companies would offer their subscribers this emergency service as an option, either free or under tariff, helping to defray the cost of maintaining the required receiver sites and staffing the dispatch center.

Users of Part 15 devices might be required to register their unit, or the cost of the 911 service could be subsidized by the manufacturer who could recoup the limited cost through the resale or reprogramming of a disabled unit.

We believe a combination of the above methods can underwrite the cost of operating such a system, or responsibility therefore could be assumed by public safety agencies, charities, or trade associations in the communications sector.

REGULATORY FRAMEWORK

We believe the Commission should explore the proposed concept by opening a Rulemaking, seeking specific comments as to how such a service would be structured.

Certainly Public Safety Agencies might consider operating the massive radio location system as a wireless enhancement of the now ubiquitous "911" services. However, a better solution would be for the costs related to this type of service be borne by the users themselves.

In relatively "safe" communities, if no entrepreneur came forward to claim such a license, it would likely be because there was no demand. There would always be the possibility that if a need were demonstrated, that local government could then install the necessary infrastructure and provide the service.

In communities where a clear demand existed, the "license" to operate such a system[5], could be granted to either a commercial venture or a governmental entity.

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[5]The Commission does not ordinarily license receive-only radio systems, but we believe that in this instance there is little choice but to do so, because of the presumed life-and-death situations. Later, it may be that "wireless" smoke alarms, and other similar devices may make their way to market, so we believe locating such frequencies in the Part 15 bands (especially 1911 MHz, which would presumably be vacant, or made vacant) is highly appropriate.

Such a license would carry with it the obligation to construct and maintain a system of sufficient coverage on a 24-hour basis, either staffed or automated, to provide reasonable assurance that a distress transmission would be received, the transmitter location determined, and forwarded to the appropriate authorities for action.

SUMMARY

For these and other good reasons, we urge the Commission to act favorably on this request, and open this issue to public comment looking towards establishment of the required frequency allocation, and determination of technical standards.

The LuxCel Group, Inc. and its affiliates will actively pursue development of products for this proposed service. We believe sufficient need can be demonstrated for such an allocation, to justify its creation.

Respectfully submitted,

THE LUXCEL GROUP, INC.

By: _____
Michael A. Pfeffer
President & CEO

By: Elmer M. Lipsey /as
Dr. Elmer M. Lipsey
Chief Scientist